## **CLAIMS**

What is claimed is:

1. A compound represented by the structural formula:

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or a pharmaceutically acceptable salt thereof, wherein  $R_1$  and  $R_2$  are independently an aliphatic group, a substituted aliphatic group, an aryl group or a substituted aryl group,

R<sub>10</sub> is -H or unsubstituted alkyl group;

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R<sub>6</sub> is a carboxylic acid protecting group; and

Y is a covalent bond or a substituted or unsubstituted straight-chained hydrocarbyl group.

- 2. The compound of Claim 1 wherein Y is a covalent bond or  $-C(R_7R_8)$  and  $R_7$  and  $R_8$  are each independently -H, an aliphatic or substituted aliphatic group, or  $R_7$  is -H and  $R_8$  is a substituted or unsubstituted aryl group, or,  $R_7$  and  $R_8$ , taken together, are a  $C_2$ - $C_6$  substituted or unsubstituted alkylene group.
- 3. The compound of Claim 2 wherein  $R_7$  and  $R_8$  are both -H.

- 4. The compound of Claim 1 wherein  $R_1$  is an aryl group or a substituted aryl group.
- 5. The compound of Claim 1 wherein R<sub>2</sub> is an alkyl group or a substituted lower alkyl group.
- 6. The compound of Claim 2 wherein R<sub>2</sub> is methyl or ethyl; R<sub>7</sub> is -H; and R<sub>8</sub> is -H or methyl.
  - 7. The compound of Claim 6 wherein  $R_1$  is phenyl or substituted phenyl.
  - 8. The compound of Claim 7 wherein  $R_1$  is phenyl and  $R_2$  is methyl.
  - 9. The compound of Claim 2 wherein R<sub>1</sub> is an aliphatic group or a substituted aliphatic group.
- 10 10. The compound of Claim 2 wherein R<sub>2</sub> is an aliphatic group or a substituted aliphatic group.
  - 11. The compound of Claim 10 wherein  $R_2$  is a lower alkyl group or a substituted lower alkyl group.
  - 12. The compound of Claim 1 wherein  $R_{10}$  is H.
- 15 13. The compound of Claim 2 wherein  $R_{10}$  is H.

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14. A compound represented by the structural formula:

$$R_1$$
  $S$   $R_2$   $N$   $R_5$   $R_{10}$ 

or a pharmaceutically acceptable salt thereof, wherein  $R_1$  and  $R_2$  are independently an aliphatic group, a substituted aliphatic group, an aryl group or a substituted aryl group;  $R_5$  is -H or a hydrazine protecting group and  $R_{10}$  is -H or a substituted or unsubstituted alkyl group.

- 15. The compound of Claim 14 wherein  $R_5$  is a hydrazine protecting group when  $R_2$  is an aryl group or a substituted aryl group.
- The compound of Claim 14 wherein R<sub>5</sub> is -H or a hydrazine protecting group when
  R<sub>2</sub> is an aliphatic or substituted aliphatic group and R<sub>10</sub> is -H or an unsubstituted alkyl group.
  - 17. The compound of Claim 14 wherein  $R_2$  is an aliphatic group or a substituted aliphatic group.

- 18. The compound of Claim 17 wherein  $R_1$  is an aryl group or a substituted aryl group.
- 19. The compound of Claim 18 wherein R<sub>2</sub> is an alkyl group or a substituted lower alkyl group.
- 5 20. The compound of Claim 19 wherein  $R_2$  is methyl or ethyl.
  - 21. The compound of Claim 14 wherein R<sub>1</sub> is phenyl or substituted phenyl.
  - 22. The compound of Claim 21 wherein  $R_1$  is phenyl and  $R_2$  is methyl.
- The compound of Claim 21 wherein R<sub>1</sub> is phenyl substituted with one or more 23. groups selected from -OH, -Br, -Cl, -I, -F, -OR<sup>a</sup>, -O-COR<sup>a</sup>, -COR<sup>a</sup>, -CN, -NO<sub>2</sub>, -10 COOH, -SO<sub>2</sub>H, -NH<sub>2</sub>, -NHR<sup>a</sup>, -N(R<sup>a</sup>R<sup>b</sup>), -COOR<sup>a</sup>, -CHO, -CONH<sub>2</sub>, -CONHR<sup>a</sup>, -CON(RaRb), -NHCORa, -NRCORa, -NHCONH2, -NHCONRaH, -NHCON(RaRb), -NR°CONH<sub>2</sub>, -NR°CONR<sup>a</sup>H, -NR°CON(R<sup>a</sup>R<sup>b</sup>), -C(=NH)-NH<sub>2</sub>, -C(=NH)-NHR<sup>a</sup>, - $C(=NH)-N(R^aR^b)$ ,  $-C(=NR^c)-NH_2$ ,  $-C(=NR^c)-NHR^a$ ,  $-C(=NR^c)-N(R^aR^b)$ ,  $-NH-C(=NR^c)-N(R^aR^b)$ ,  $-NH-C(=NR^c)-N(R^aR^b)$  $C(=NH)-NH_2$ ,  $-NH-C(=NH)-NHR^a$ ,  $-NH-C(=NH)-N(R^aR^b)$ ,  $-NH-C(=NR^c)-NH_2$ ,  $-NH-C(=NR^c)-NH_2$  $NH-C(=NR^c)-NHR^a$ ,  $-NH-C(=NR^c)-N(R^aR^b)$ ,  $-NR^dH-C(=NH)-NH_2$ ,  $-NR^d-C(=NH)-NH_2$ 15  $NHR^{a}$ ,  $-NR^{d}$ -C(=NH)- $N(R^{a}R^{b})$ ,  $-NR^{d}$ - $C(=NR^{c})$ - $NH_{2}$ ,  $-NR^{d}$ - $C(=NR^{c})$ - $NHR^{a}$ ,  $-NR^{d}$ - $C(=NR^c)-N(R^aR^b)$ ,  $-NHNH_2$ ,  $-NHNHR^a$ ,  $-NHN(R^aR^b)$ ,  $-SO_2NH_2$ ,  $-SO_2NHR^a$ , -SO,NRaRb, -CH=CHRa, -CH=CRaRb, -CRc=CRaRb, -CRc=CHRa, -CRc=CRaRb, -CCR<sup>a</sup>, -SH, -SR<sup>a</sup>, -S(O)R<sup>a</sup>, -S(O)<sub>2</sub>R<sup>a</sup>, alkyl groups, substituted alkyl group, non-20 aromatic heterocyclic group, substituted non-aromatic heterocyclic group, benzyl group, substituted benzyl group, aryl group or substituted aryl group wherein Ra-Rd each independently an alkyl group, substituted alkyl group, benzyl, substituted benzyl, aromatic or substituted aromatic group, or, -N(RaRb), taken together, can also form a substituted or unsubstituted non-aromatic heterocyclic group.

- 24. The compound of Claim 23, wherein  $R_2$  is methyl.
- 25. The compound of Claim 14 wherein R<sub>1</sub> is a lower alkyl group and R<sub>2</sub> is a phenyl group substituted with one or more groups selected from -OH, -Br, -Cl, -I, -F, -OR<sup>a</sup>, -O-COR<sup>a</sup>, -COR<sup>a</sup>, -CN, -NO<sub>2</sub>, -COOH, -SO<sub>3</sub>H, -NH<sub>2</sub>, -NHR<sup>a</sup>, -N(R<sup>a</sup>R<sup>b</sup>), -COOR<sup>a</sup>, -CHO, -CONH<sub>2</sub>, -CONHR<sup>a</sup>, -CON(R<sup>a</sup>R<sup>b</sup>), -NHCOR<sup>a</sup>, -NRCOR<sup>a</sup>, -NHCONH<sub>2</sub>, 5 -NHCONR<sup>a</sup>H, -NHCON(R<sup>a</sup>R<sup>b</sup>), -NR<sup>c</sup>CONH<sub>2</sub>, -NR<sup>c</sup>CONR<sup>a</sup>H, -NR<sup>c</sup>CON(R<sup>a</sup>R<sup>b</sup>),  $-C(=NH)-NH_{2}$ ,  $-C(=NH)-NHR^{a}$ ,  $-C(=NH)-N(R^{a}R^{b})$ ,  $-C(=NR^{c})-NH_{2}$ ,  $-C(=NR^{c})-NHR^{a}$ ,  $-C(=NR^c)-N(R^aR^b)$ , -NH-C(=NH)-NH,  $-NH-C(=NH)-NHR^a$ ,  $-NH-C(=NH)-N(R^aR^b)$ ,  $-NH-C(=NR^c)-NH_2$ ,  $-NH-C(=NR^c)-NHR^a$ ,  $-NH-C(=NR^c)-N(R^aR^b)$ ,  $-NR^dH-C(=NH)$ -NH<sub>2</sub>, -NR<sup>d</sup>-C(=NH)-NHR<sup>a</sup>, -NR<sup>d</sup>-C(=NH)-N(R<sup>a</sup>R<sup>b</sup>), -NR<sup>d</sup>-C(=NR<sup>c</sup>)-NH<sub>2</sub>, -NR<sup>d</sup> 10  $-C(=NR^c)-NHR^a$ ,  $-NR^d-C(=NR^c)-N(R^aR^b)$ ,  $-NHNH_2$ ,  $-NHNHR^a$ ,  $-NHN(R^aR^b)$ , -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sup>a</sup>, -SO<sub>2</sub>NR<sup>a</sup>R<sup>b</sup>, -CH=CHR<sup>a</sup>, -CH=CR<sup>a</sup>R<sup>b</sup>, -CR<sup>c</sup>=CR<sup>a</sup>R<sup>b</sup>, -CR<sup>c</sup>=CHR<sup>a</sup>, -CR<sup>c</sup>=CR<sup>a</sup>R<sup>b</sup>, -CCR<sup>a</sup>, -SH, -SR<sup>a</sup>, -S(O)R<sup>a</sup>, -S(O)<sub>2</sub>R<sup>a</sup>, alkyl groups, substituted alkyl group, non-aromatic heterocyclic group, substituted non-aromatic heterocyclic group, benzyl group, substituted benzyl group, aryl group or substituted 15 aryl group wherein Ra-Rd each are independently an alkyl group, substituted alkyl group, benzyl, substituted benzyl, aromatic or substituted aromatic group, or, -N(RaRb), taken together, can also form a substituted or unsubstituted non-aromatic heterocyclic group.